ROCKS AND MINERALS

Read the General Rules in the manuals and on www.soinc.org as they apply to every event.

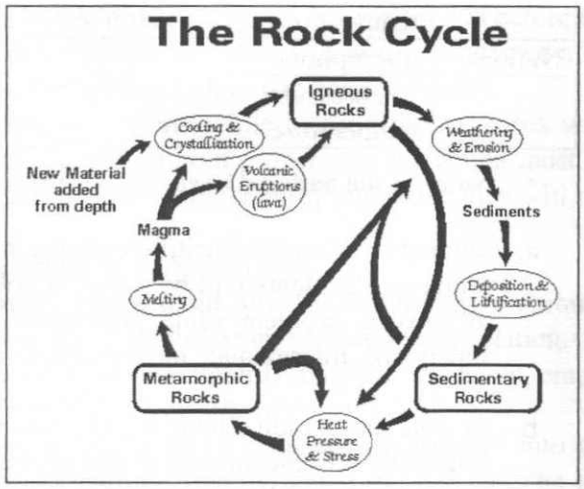
1. **DESCRIPTION**: Teams will demonstrate their knowledge of rocks and minerals.

   A TEAM OF UP TO: 2 **APPROXIMATE TIME**: 40-50 Minutes

2. **EVENT PARAMETERS**: Each **team** may bring only one magnifying glass; one commercially published resource that may be tabbed and written in and one 3-ring binder (any size) containing pages of information in any form from any source. The pages must be 3-hole punched and inserted into the rings (sheet protectors are allowed).

3. **THE COMPETITION**:
   a. Equal time intervals, as determined by the supervisor, will be allotted for each station. When the start signal is given, participants will begin work at their initial station.
   b. Participants may not move to the next station until prompted to do so, may not skip stations, or return to any previously visited station.
   c. Specimens and other materials placed at the various stations may not be taken to other stations.
   d. HCl will not be provided, nor may it be brought to or be used during the competition. Written descriptions as to how a specimen might react were it to be tested with HCl may be provided.
   e. Only those specimens appearing on the **Official NSO list (see www.soinc.org)** will be used in the competition with the following exception: Tournament Directors may include up to five additional specimens important to their own state. If additional specimens are to be included, all teams must be notified **no later than three weeks prior to the competition.**

4. **Topics may include, but are not limited to**:
   a. Specimen identification
   b. Rock cycle
   c. Properties of minerals
   d. Mineral groups
   e. Economic importance
   f. Formation and properties of igneous, sedimentary, and metamorphic rocks
   g. Clues to past environments
   h. Composition and structure of minerals
   i. Bowen's reaction series



5. **REPRESENTATIVE STATION ACTIVITIES**:
   a. Using the materials provided, fingernails included, determine the relative hardness of each of these six minerals. List the specimens, by name and number, in order of increasing hardness.
   b. Match each metamorphic rock with the type of rock from which it may have been formed.

6. **SCORING**: Total scores will determine rankings in this event. Ties will be broken by the accuracy or quality of answers to selected questions.

Recommended Resources: All reference and training resources including the **Science Olympiad Rock & Mineral Teaching Guide,** the **Bio/Earth CD** and the **National Audubon Society Field Guide to North American Rocks and Minerals** are available on the Official Science Olympiad Store or Website at http://www.soinc.org Also, **Rocks and Minerals kits** (*excluding only silver, gold, and diamond) may be purchased by check or School Purchase Order from ESES, P.O. Box 503, Lee's Summit, MO 64063 (No Credit Cards or Phone Orders-PH 816-524-5635; FAX 816-525-4263) item OLY01 at $85.00. Price quoted includes shipping and handling.